

## REMARKS

Reconsideration of this application, in view of the foregoing amendments and the following remarks, is respectfully requested.

### Claim Rejections - 35 USC § 102

Claims 20-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Garcia-Luna-Aceves et al. (US Pub 2002/0141479 A1). Hereinafter, referred to as Garcia-Luna-Aceves. Applicants respectfully traverse these rejections.

Bluetooth does not necessarily use RTR (ready-to-receive) packets. Basically in Garcia-Luna-Aceves, the "master" sends a RTR message to one of the "slaves" and if the "slave" receives the message correctly, then that slave knows the master is ready to receive data and it starts to transmit. In Bluetooth, this mechanism is different. The "master" sends data to the "slave", and if the "slave" receives the packet, it will send back either an ACK and NAK (for previous packet) and/or data. There is a difference between the protocols in that the Garcia-Luna-Aceves approach, the "master" is saying that it's ready to receive data, whereas in Bluetooth, the "master" sends data when it needs to the slave or polls that device in case it does not have data to send.

There is another difference between the Garcia-Luna-Aceves approach and the instant patent application. In the Garcia-Luna-Aceves approach, what happens is that a "master or device x" sends an RTR packet to the "slave or device y" on a channel "h1" at time "t1"; the "slave or device y" responds with data to the "master or device x" on the same channel "h1" from "t2 to t9" (as shown in Fig. 1 of Garcia-Luna-Aceves). In the instant patent application, an RTR is not necessarily used.

Now what is different is that the rest of the devices in the network continue to operate at time "t2", "t3", etc. For example, in Fig. 1, device "z" sends an RTR to device "w" at time "t2"; device "w" does not have anything to send, so it responds with a clear-

to-send (CTS) at time "t3", and then device "z" sends data to device "w" from "t4 to t10"; and finally device "w" responds with an ACK at time "t11". Note that this is different than what in Bluetooth for 2 reasons: (1) if the "master", which in this case is device "z", has data it will send it in the original message at time "t3". The master will never wait until the slave gives it permission to transmit. This is why the Garcia-Luna-Aceves approach is entitled a receiver-initiated approach, whereas Bluetooth is a master-initiated approach. The second reason (2) is that while the device "x" and device "y" are communicating, the remaining devices in the network are silent. If the devices were Bluetooth devices in Fig. 1, then only devices "x" and "y" would be communicating during time "t1 to t9". Therefore, the approach by Garcia-Luna-Aceves is different than the one in the instant patent. The instant patent application deals with a TDD systems where only one device in the network is active at any one time, unlike the Garcia-Luna-Aceves approach.

Another difference can be found in the text of Garcia-Luna-Aceves (page 4, 60<sup>th</sup> paragraph). Bluetooth is a slotted protocol system, where the slots times are pre-defined and 625 microseconds in length. Whereas the text on page 4, 60<sup>th</sup> paragraph, states that the "dwell time for a frequency hop in the RICH protocols need only be of sufficient duration for executing handshake." Therefore, the time slots show in Fig. 1 are not regularly spaced as shown in the figure, but rather the length of the time 2 devices stay on the same frequency is dependent on how much information they have to exchange. So the figure, in particularly where the time slots all line up in a nice linear fashion is not correct and is actually misleading. Bluetooth, on the other hand, has time slots whose slot lengths are pre-defined in the standard. In addition, the packets will occupy 1 slot, 3 slots or 5 slots. The duration and timing of the slots is independent of the data that must be transferred. The data has to fit in these pre-defined chunks or it must be spread out amongst multiple packets.

The Examiner stated that Garcia-Luna-Aceves "discloses a wireless network is a Bluetooth wireless network (page 2, 13<sup>th</sup> paragraph and Fig. 2 – a MAC protocol taking advantage of characteristics of FHSS radios operating in the ISM bands while assuring

that the transmissions are free of collisions. It is known that Bluetooth frequency band is also an ISM band, 2.4 GHz band)". No where in paragraph 13 does it mention Bluetooth. It says that there "exists a need for a MAC protocol that ... overcomes the deficiencies of previously developed MAC protocols". Well, there are several other MAC protocols that exist in the ISM band. The Examiner jump to the conclusion that it is a Bluetooth protocol? There are other examples, such as 802.11 FH protocol, cordless FH protocols, etc. The examiner's reason for rejection is found by using the instant patent application to infer that the previous protocols that Garcia-Luna-Aceves were referring to was Bluetooth.

In the Garcia-Luna-Aceves approach, multiple devices can be communicating at the same time and they resynchronize on the same hopping frequency later on in the random sequence. In our extension to Bluetooth, the instant patent application specifically have only one device talking at any one time (so a pair may talk on the first random channel) and then another pair talk on the second random channel. In the Garcia-Luna-Aceves approach, the next time all devices synch up, they might be on the tenth random channel. So after the first channel is where the two protocols start to differ.

In any event, claims 20 and 26 have been amended to recite the limitation of master-to-slave time slots and slave-to-master time slots. Garcia-Luna-Aceves alone or in combination does not teach this limitation.

In light of the above, it is respectfully submitted that the present application is in condition for allowance, and notice to that effect is respectfully requested.

While it is believed that the instant response places the application in condition for allowance, should the Examiner have any further comments or suggestions, it is respectfully requested that the Examiner contact the undersigned in order to expeditiously resolve any outstanding issues.

Respectfully submitted:

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